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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,645	09/28/2006	Magnus Pelz	P/1228-214	1626

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NEW YORK, NY 100368403

EXAMINER	
DAVIS, MARY ALICE	

ART UNIT	PAPER NUMBER
3748	

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06/07/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/594,645	PELZ ET AL.	
	Examiner	Art Unit	
	MARY A. DAVIS	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 April 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11 and 13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11 and 13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 June 2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brookshire et al. (US 7013879), in view of Aupperle et al. (US 2004/0050374), and in view of Zurawski et al. (US 6601387).

Regarding **claim 1**, Brookshire et al. discloses an arrangement for recirculation of exhaust gases in a supercharged combustion engine (168), the arrangement comprising an exhaust line (178) operable to lead exhaust gases out from the combustion engine; an inlet line (188 to 196) operable to lead first air at above atmospheric pressure to the combustion engine; a compressor (188) positioned at the inlet line and configured to compress the first air; a return line (182) comprising a connection to the exhaust line and a connection to the inlet line, and configured to recirculate the exhaust gases from the exhaust line to a position of the inlet line downstream of the compressor (188); a cooler (190) operable to cool the exhaust gases in the return line; an air cooler (194) cooled by ambient air, the air cooler being incorporated in the inlet line downstream from the connection of the return line to the inlet line so that, when the exhaust gases are returned via the return line, the air cooler

cools a mixture of the exhaust gases and the first air before the mixture is led to the combustion engine (194, Fig. 8).

Brookshire fails to disclose the return line cooler being a liquid-medium cooler operable to cool the exhaust gases in the return line by use of a liquid medium and an engine coolant cooler operable to cool the liquid medium for cooling the combustion engine and having a main extend positioned parallel to a main extend of the air cooler.

Aupperle teaches a liquid-medium cooler operable to cool the exhaust gases in the return line by use of a liquid medium (paragraph 0017).

It would have been obvious for a person having ordinary skill in the art at the time the invention was made to utilize a liquid-medium cooler in the return line in order to efficiently reduce the temperature of the exhaust to a design temperature before returning the exhaust to the intake line.

However, the modified supercharged engine of Brookshire/ Aupperle fails to disclose an engine coolant cooler operable to cool the liquid medium for cooling the combustion engine and having a main extend positioned parallel to a main extend of the air cooler.

Zurawski et al. teaches an engine coolant cooler (166) operable to cool the liquid medium for cooling the combustion engine (see Figure 2, Column 6, lines 24-27) and having a main extend positioned parallel to a main extend of the air cooler (154) (see Figure 2).

It would have been obvious for a person having ordinary skill in the art at the time the invention was made to utilize an engine coolant cooler operable to cool the liquid

medium for cooling the combustion engine and having a main extend positioned parallel to a main extend of the air cooler in the modified supercharged engine of Brookshire / Aupperle, in order to reduce the required space for the cooling equipment while increasing the system efficiency through the combination of cooling systems.

Regarding **claims 2, 4-7, 9 and 10**, Brookshire further discloses a cooling system containing the liquid medium (paragraph 0017) operable for cooling the combustion engine, an EGR valve (184) incorporated in the return line, a control unit (the inherent controller that operates 184) for the EGR valve, wherein the combustion engine is a diesel engine or an Otto engine (background), a turbine (180) positioned and operable to be driven by the exhaust gases in the exhaust line which are not led into the return line (see Figure 8), and a compressor operable to be driven by the turbine so that the compressor compresses the air in the inlet line (188).

Regarding **claims 3, 8, 11, and 13** the modified supercharged engine of Brookshire/Aupperle discloses the claimed invention as discussed above, however, fails to disclose the liquid-medium cooler positioned in close physical proximity to an engine coolant cooler operable to cool the liquid medium for cooling the combustion engine, a venturi between the return and inlet line, and a fan positioned and configured to cool both the engine coolant cooler and the air cooler.

Zurawski et al. teaches a cooler (154) and liquid-medium cooler (158) positioned in close physical proximity to an engine coolant cooler (166) operable to cool the liquid

medium for cooling the combustion engine (see Figure 2) (the limitation directed to "close physical proximity" is broad with no specific clarification in the specification as to how close is "close physical proximity". The limitation is interpreted broadly, so that any component in the engine compartment and/or vehicle may be considered in "close physical proximity"), a venturi (col. 1, lines 45-50) between the return and inlet line, and a fan (164) positioned and configured to cool both the engine coolant cooler and the air cooler (see Figure 2).

It would have been obvious for a person having ordinary skill in the art at the time the invention was made to utilize a cooler arrangement as described in order to reduce the required space for the cooling equipment while increasing the system efficiency through the combination of cooling systems.

Response to Arguments

Applicant's arguments filed November 17, 2009 have been fully considered but they are not persuasive. Claim 1 now includes limitations previously presented in claims 12 and 13.

In response to the applicants' arguments on page 6, applicants argues that Zurawski does not disclose or suggest an air cooler incorporated in the inlet line downstream from the connection of the return line to the inlet line so that, when the exhaust gases are returned via the return line, the air cooler cools a mixture of the exhaust gases and the first air before the mixture is led to the combustion engine, and an engine coolant cooer having a main extent positioned parallel to a main extent of the air cooler. As discussed above, Brookshire discloses an air cooler (194) incorporated in

the inlet line downstream from the connection of the return line (182) to the inlet line so that, when the exhaust gases are returned via the return line, the air cooler cools a mixture of the exhaust gases and the first air (the first air is from compressor (188)) before the mixture is led to the combustion engine (168) (see Figure 8, and rejection above). Zurawski teaches an engine coolant cooer (166) having a main extent positioned parallel to a main extent of the air cooler (154) (see Figure 2). Brookshire is combined with Aupperle and Zurawski to meet the claim limitations in claim 1. The entire set of claim limitations are disclosed or taught above with rational on combining Brookshire with Aupperle and Zurawski, and therefore, the Examiner has established the prima facie case of obviousness.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARY A. DAVIS whose telephone number is (571)272-9965. The examiner can normally be reached on Monday thru Thursday; 5:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MARY A DAVIS/
Primary Examiner, Art Unit 3748